

## RECORD OF COMMUNICATION

January 30, 2018

Summary of Meeting (conference call) focused on Powertech's Comments on the draft UIC Class III Permit (see EPA's attached outline of questions sent to Powertech prior to the meeting).

John Mays, Powertech

Blake Steele, Powertech

Valois Shea, EPA

Douglas Minter, EPA

Starting at 9 am, EPA and Powertech were able to discuss the following topics to provide EPA clarification on Powertech's comments:

- 1) Differences between Preliminary Economic Assessment and Class III UIC permit application (e.g., production flow rates of 8,000 gpm in the PEA vs. 4,000 gpm in the permit application).
- 2) Powertech's plans for Well 16 located within one of the proposed AE area delineation options which were expressed in their comments.
- 3) Class III permit requirements for step rate tests (to determine MAIP) and where these tests can be run without compromising the integrity of the injection zone (i.e., avoid fracturing).
- 4) Bounding analysis process describing the pressure dynamics between the manifold/header house monitoring and the wellhead monitoring to ensure that injection formation fracture pressure is never exceeded.
- 5) Injection well construction options including screened injection tubing designs to release gas without letting water into injection zone at relatively low pressures. This is similar to how a private water well operates.
- 6) Purpose of "trend" wells which is a "control" well that allows earlier detection of "flares" within the injection zone (prior to hitting a monitoring well) where flow rates through thinner sands (via aquitards) may be higher).
- 7) Distinguishing between actual draw down of the aquifer's potentiometric surface from changes in barometric pressures during a pump test.

John and Blake met with Darcy and RA in early December and asked for a timetable informing how long it would take EPA to make final permit decisions. Blake committed to emailing Darcy and Doug about this since neither Douglas or Valois were at this meeting.

We also discussed the process we must follow for compliance with the Endangered Species Act in more detail than was provided in the draft permits.

We agreed to meet next on Friday, February 23 at 9 am and to convey a list of topics to discuss to Powertech the Friday before (2/16/18).

Conference call concluded at 10:30 am.